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22. (amended) A chimeric gene capable of causing altered levels of linolenic acid in a transformed plant cell, the gene comprising a nucleic acid fragment of Claim 1 or 20, the fragment operably linked to regulatory sequences.

23. (amended) Plants [containing] comprising the chimeric gene of claim 22.

sub 22  
24. (amended) ~~Seeds~~ obtained from the plants of claim 23 wherein such seeds have the desired fatty acid phenotype.

Remarks

Claims 1, 20, 21-24 and 26-28 were rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding the concern that claim 1 "is indefinite in the recitation of 50% identity with regard to DNA sequence, given that determination of percent identity is dependent upon the particular algorithm and parameters used in the calculation, and no such algorithm and parameters have been set for the in the claim", it is noted that the method of Needleman et al., J. Mol. Biol., (1970) 48:443-453 is cited in the specification on page 18 at lines 38-31. It is respectfully submitted that such algorithm and parameters need not be recited in the claim given the guidance provided in the specification.

The term "desaturase-related" is defined in the specification on page 17 at lines 22-29 as referring to "enzymes whose catalytic product may not be a carbon-carbon double bond but whose mechanism of action is similar to that of a fatty acid desaturase (that is, catalysis of the displacement of a carbon-hydrogen bond of a fatty acid chain to form a fatty-hydroxyacyl intermediate or end-product.)"

Claim 20 has been amended to correct the recitation of the SEQ ID NOS.

Accordingly, withdrawal of the rejection of claims 1 and 20 under 35 USC §112, second paragraph, is respectfully requested in view of the above discussion and amendments.

Claim 24 was rejected under 35 USC §101 as being directed to non-statutory subject matter because "there is no indication that the DNA construct transformed into the parent plant will be present in the claimed seeds. Given Mendelian inheritance only half of the seeds will comprise the introduced genetic construct, thus half of the seeds will be indistinguishable from those which would occur in nature." Thus, claim 24 has been amended to distinguish the claimed seeds from those that would occur in nature.

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In view of this amendment, withdrawal of the rejection of claim 24 under 35 USC §101 is respectfully requested.

A terminal disclaimer is submitted herewith the address the obviousness-type double patenting rejection of claim 1 over the claims of copending Application No. 08/244,205 which issued as U.S. Patent No. 5,952,544 on September 14, 1999.

Claim 20 was rejected under 35 USC § 102 (a) as being anticipated by Heinemann et al. (sequence accession no. Q11851) on the ground that "Heinemann et al. teach a sequence of 22 nucleotides that is identical to a portion of SEQ ID No:1, for example."

The Heinemann et al. sequence is a GluR3 cDNA that was isolated from a rat forebrain cDNA. The cDNA, having ATCC No. 68133, can be used in drug screening to determine whether a substance is a functional ligand for the receptor by monitoring ion channel activity.

In contrast, the instant invention concerns, inter alia, an isolated nucleic acid fragment comprising a nucleic acid sequence which encodes a fatty acid desaturase or fatty acid desaturase-related enzyme or a nucleic acid sequence or a part thereof which can be used in antisense inhibition or sense suppression of endogenous desaturase activity in a transformed plant. The sequence described by Heinemann et al. is not a desaturase or desaturase-related sequence. Accordingly, sequence accession no. Q11851 does not anticipate the claim 20.


In view of the above discussion, Applicants respectfully request withdrawal of the rejection of claim 20 under 35 USC §102(a).

It is respectfully submitted that the case is now in form for allowance which allowance is respectfully requested.

A petition for a one (1) month extension of time accompanies this response.

Please charge any fees associated with the filing of this response ad the petition for the extension of time to Deposit Account No. 04-1928 (E. I. du Pont de Nemours and Company). If the fee is insufficient or incorrect, please charge or credit the balance to the above-identified account.

Respectfully submitted,

  
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